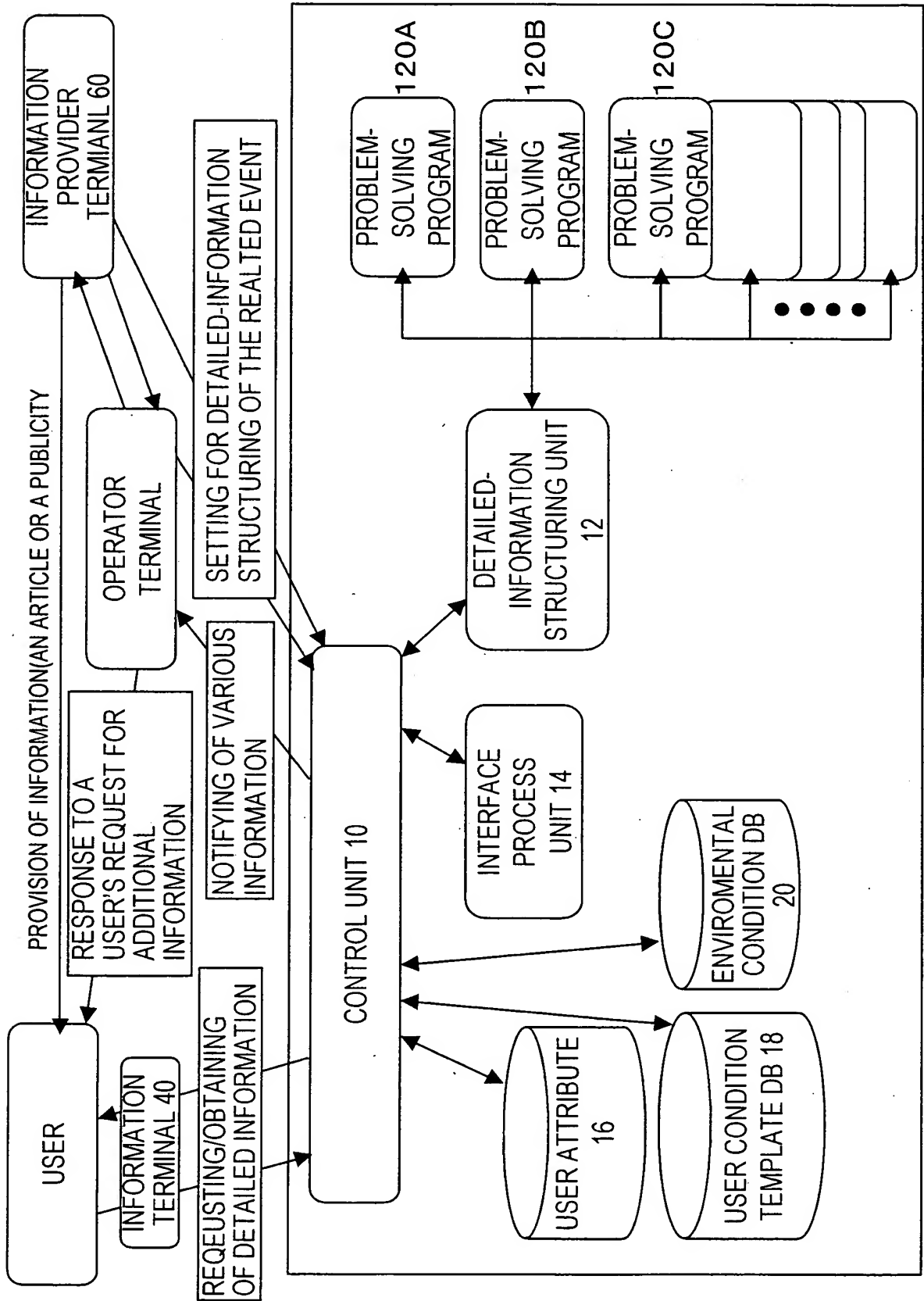


FIG. 1



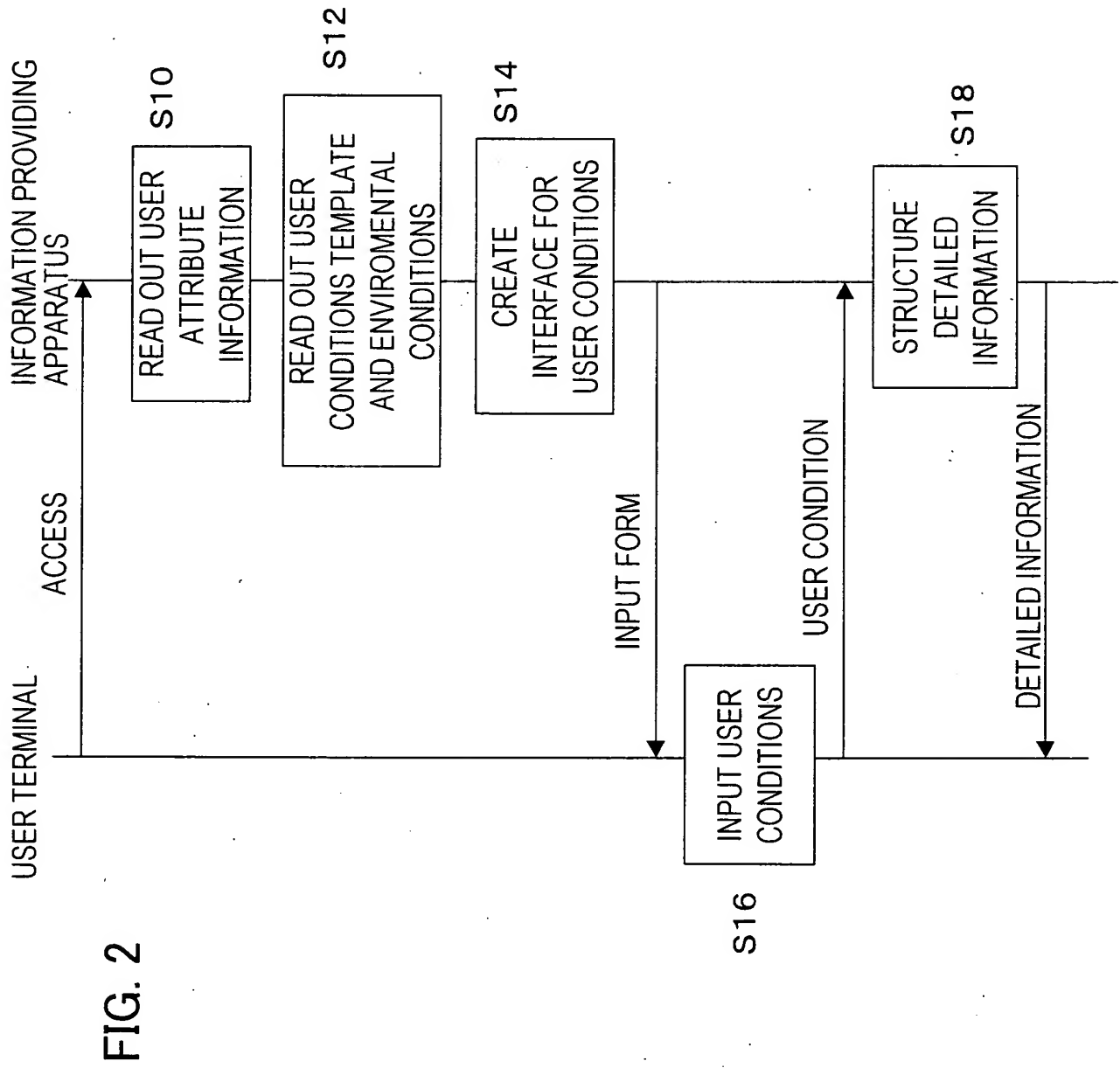


FIG. 3

This is the combination of telephone companies suitable for Mr./Ms. [user attribute DB: this user: log-in name].		
within the city	[the optimal telephone companies (within the city)]	[telephone charge (within the city)] yen
out of the city within the prefecture	[the optimal telephone companies (out of the city within the prefecture)]	[telephone charge (out of the city within the prefecture)] yen
out of the prefecture	[the optimal telephone companies (out of the prefecture)]	[telephone charge (out of the prefecture)] yen
international	[the optimal telephone companies (international)]	[telephone charge (international)] yen
Internet	[the optimal telephone companies (Internet)]	[telephone charge (Internet)] yen
Total	[telephone charge (within the city + out of the city within the prefecture + out of the prefecture + international + Internet)] yen	

FIG. 4

Name of Attribute	Type Statement, Name of Variables, Possible Range of Values etc. Default Values Remark
The Place of Fixed Phone	(String userAddressPrefecture, String userAddressCity) (String userTelephoneNumberAreaCode, String userTelephoneNumberLocalOfficeNumber)
	(list of names of prefectures, list of names of cities and villages) (area code, prefix)
	(user attribute DB: this user: address/prefecture, user attribute DB: this user: address (cities and villages) (user attribute DB: this user: telephone number/area code, user attribute DB: this user: telephone number/prefix)
	Please input the place of the fixed telephone used: (name of prefecture · city or village), or telephone number (area code · prefix).
Call-destination 1	(String receiver1AddressPrefecture, String receiver1AddressCity) (String receiver1TelephoneNumberAreaCode, String receiver1TelephoneNumberLocalOfficeNumber)
	(list of names of prefecture, list of names of cities and villages) (area code, prefix)
	(user attribute DB: this user: call-destination 1 address/prefecture, user attribute DB: this user: call-destination 1 address/city or village) (user attribute DB: this user: call-destination 1 telephone number/area code, user attribute DB: this user: call-destination 1 telephone number (prefix)
	Please input the most frequently called destination (prefecture · city or village), or telephone number (area code · prefix).
Call-destination 2	(String receiver2AddressPrefecture, String receiver2AddressCity) (String receiver2TelephoneNumberAreaCode, String receiver2TelephoneNumberLocalOfficeNumber)
	(list of names of prefecture, list of names of cities and villages) (area code, prefix)
	(user attribute DB: this user: call-destination 2 address/prefecture, user attribute DB: this user: call-destination 2 address/city or village) (user attribute DB: this user: call-destination 2 telephone number/area code, user attribute DB: this user: call-destination 2 telephone number (prefix)
	Please input the second-most frequently called destination (prefecture · city or village), or telephone number (area code · prefix).
Call-destination 3	(String receiver3AddressPrefecture, String receiver3AddressCity) (String receiver3TelephoneNumberAreaCode, String receiver3TelephoneNumberLocalOfficeNumber)
	(list of names of prefecture, list of names of cities and villages) (area code, prefix)
	(user attribute DB: this user: call-destination 3 address/prefecture, user attribute DB: this user: call-destination 3 address/city or village) (user attribute DB: this user: call-destination 3 telephone number/area code, user attribute DB: this user: call-destination 3 telephone number (prefix)
	Please input the third-most frequently called destination (prefecture · city or village), or telephone number (area code · prefix).

FIG. 5

Length of time to call (within the city)	(String talkTimesCategory1Daytime, String talkTimesCategory1EarlyNight, String talkTimesCategory1LateNight, String talkTimesCategory1Morning)
	(0-720, 0-720, 0-720, 0-720)
	(User attribute DB: this user: time to call/within the city/daytime, user attribute DB: this user: time to call/within the city/early night, user attribute DB: this user: time to talk/within the city/late night, user attribute DB: this user: time to call/within the city/early morning)
	Please input the standard length of time to call per month (within the city) for each of daytime, early night, late night and early morning.
Length of time to call (out of the city within the prefecture)	(String talkTimesCategory2Daytime, String talkTimesCategory2EarlyNight, String talkTimesCategory2LateNight, String talkTimesCategory2Morning)
	(0-720, 0-720, 0-720, 0-720)
	(User attribute DB: this user: time to call/out of the city within the prefecture/daytime, user attribute DB: this user: time to call/out of the city within the prefecture/early night, user attribute DB: this user: time to talk/out of the city within the prefecture/late night, user attribute DB: this user: time to call/out of the city within the prefecture/early morning)
	Please input the standard length of time to call per month (out of the city within the prefecture) for each of daytime, early night, late night and early morning.
Length of time to call (out of the prefecture)	(String talkTimesCategory3Daytime, String talkTimesCategory3EarlyNight, String talkTimesCategory3LateNight, String talkTimesCategory3Morning)
	(0-720, 0-720, 0-720, 0-720)
	(User attribute DB: this user: time to call/out of the prefecture/daytime, user attribute DB: this user: time to call/out of the prefecture/early night, user attribute DB: this user: time to talk/out of the prefecture/late night, user attribute DB: this user: time to call/out of the prefecture/early morning)
	Please input the standard length of time to call per month (out of the prefecture) for each of daytime, early night, late night and early morning.
Length of time to call (international)	(String talkTimesCategory4Daytime, String talkTimesCategory4EarlyNight, String talkTimesCategory4LateNight, String talkTimesCategory4Morning)
	(0-720, 0-720, 0-720, 0-720)
	(user attribute DB: this user: time to call/international/daytime, user attribute DB: this user: time to call/international/early night, user attribute DB: this user: time to talk/international/late night, user attribute DB: this user: time to call/international/early morning)
	Please input the standard length of time to call per month (international) for each of daytime, early night, late night and early morning.
Length of time to use the Internet	(String internetUseTimes)
	(0-720)
	(User attribute DB: this user: time to use the Internet)
ISP	Please input the standard length of time to use the Internet per month.
	(String isp)
	(List of main ISPs)(input freely)
	(User attribute DB: this user: ISP)
Line for the Internet	Please input the name of the Internet service provider (ISP) used.
	(String internetAccessMedium)
	(List of types of lines for the Internet)(input freely)
	(User attribute DB: this user: line for the Internet)
	Please input the type of the line for the Internet used.

FIG. 6

```
<user ID>userID00005678</user ID>
<log-in name>fuji</log-in name>
<address>
  <prefecture>Chiba Prefecture</prefecture>
  <city or village>Chiba City</city or village>
  <ward>Mihama Ward</ward>
  <residence number>Nakase 1-9-3</residence number>
</address>
<name>
  <family name>Fuji</family name>
  <given name>Kayoko</given name>
</name>
<occupation>
  <category1>company employee</category1>
</occupation>
```

FIG. 7

Place of fixed telephone	(Chiba Prefecture, Chiba City)
Call destination 1	(Tokyo, 23-ward area)
Call destination 2	(Fukuoka Prefecture, Fukuoka City)
Call Destination 3	(Chiba Prefecture, Chiba City)
Length of time to call (within the city)	(3, 1, 0, 1)
Length of time to call (out of city within the prefecture)	(1, 0, 0, 0)
Length of time to call (out of the prefecture)	(2, 5, 3, 0)
Length of time to call (international)	(0, 0, 0, 0)
Length of time to use the Internet	10
ISP	foobar.net
Line for the Internet	analogue

FIG. 8

This is the most suitable combination of telephone companies for Ms. Fuji		
With in the city	○○Telephone	800 yen
Out of the city within the prefecture	□□Communications	100 yen
Out of the prefecture	◇◇Telecom	3,000 yen
International	☆☆Communications	0 yen
Internet	○○Telephone	1,800 yen
Total		5,700 yen

FIG. 9

Problem-Solving Program	Type of Problem	Basic Approach
Program 1	Combination optimization	Linear programming
Program 2	Combination optimization	Rule-base reasoning,
Program 3	Combination optimization	Neural network
Program 4	Combination optimization	Taboo search
Program 5	Numerical calculation	Algebraic calculation
Program 6	Numerical calculation	Statistical calculation
Program 7	Numerical calculation	Financial calculation
Program 8	Numerical calculation	Functional calculation
Program 9	Pattern matching	Least-squares method
Program 10	Pattern matching	KMP method
Program 11	Pattern matching	BM method
Program 12	- - -	- - -

FIG. 10

This is the most suitable combination of telephone companies for Ms. Fuji		
No. 1		
With in the city	○○Telephone	800 yen
Out of the city within the prefecture	□□Communications	100 yen
Out of the prefecture	◇◇Telecom	3,000 yen
International	☆☆Communications	0 yen
Internet	○○Telephone	180 yen
[Note: In case of use for one (1) hour per month]		
Total		4,080 yen
No. 2		
With in the city	○○Telephone	800 yen
Out of the city within the prefecture	□□Communications	100 yen
Out of the prefecture	◇◇Telecom	3,000 yen
International	☆☆Communications	0 yen
Internet	○○Telephone	400 yen
[Note: In case of subscribing to an ISP of ○○Telephone and use "Internet pack service 3" (up to three (3) hours per month) of ○○Telephone, (ISP connection charge + communication charge included)]		
Total		4,300 yen
No. 3		
With in the city	○○Telephone	800 yen
Out of the city within the prefecture	□□Communications	100 yen
Out of the prefecture	◇◇Telecom	3,000 yen
International	☆☆Communications	0 yen
Internet	○○Telephone	1,800 yen
[Note: In case of use for ten (10) hours per month]		
Total		5,700 yen
No. 4		
With in the city	○○Telephone	800 yen
Out of the city within the prefecture	□□Communications	100 yen
Out of the prefecture	◇◇Telecom	3,000 yen
International	☆☆Communications	0 yen
Internet	□□Communications	3,600 yen
[Note: Charge (fixed amount) for the case of use of ISDN service of □□Communications]		
Total		7,500 yen

FIG. 11

Timing to notify:		
◇ □□th day of every month	or and	◇ □day of every week
or and		
◇ When there is a change in information		
Destination of notice (e-mail address)		

FIG. 12

Timing to notify:			
◇ □□th day of every month	or and	◆ Monday of every week	
and			
◆ When there is a change in information			
Destination of notice (e-mail address)			
fuji@mail.foobar-net.com			

FIG. 13

User name: fuji
Method for response:
◇ Carried on this site.
◇ Response by e-mail. e-mail address:
Contents of query

FIG. 14

User name: fuji
Method for response:
◇ Carried on this site.
◆ Response by e-mail. e-mail address:fuji@mail.foobar-net.com
Contents of query
There seems to be no column for setting for a mobile phone on this site. Is a mobile phone not the target of this new system?
If a mobile phone is not the target of this system, is there also a charge discount system that can be used by combining with my house phone?

FIG. 15

Ms. Fuji

Thank you for your query.

Mobile phone and PHS are not the target of this new telephone subscription system.

However, the following telephone companies have their own charge discount services in which mobile phones and house phones are combined. Please contact the following addresses for details.

[List of the addresses of telephone companies]

Mr. xxxx, Customer Service, infosite.com

FIG. 16

○○News Online News

-All About the New Telephone Subscription System-

(.)

Applications for this subscription system will be accepted from March 1st, 2001 and the service will be provided from May 1st, 2001.

About a comparison of charges between telephone companies.

FIG. 17

○○News

-All About the New Telephone Subscription System-

(. . . .)

Applications for this subscription system will be accepted from March 1st, 2001 and the service will be provided from May 1st, 2001.

[○○News, Feb. 13, 2001, a comparison of charges between telephone companies] (Presented by: www.infosite.com)